

International Imaging Systems
analyzes an ocean oil slick from
3000 feet up.



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I²S and Sierra Scientific— Partners in Environmental Studies

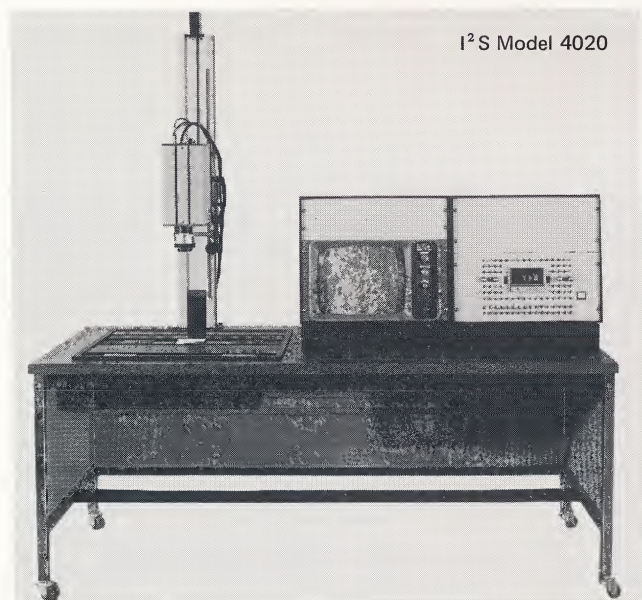
The image evaluation devices of International Imaging Systems, Mountain View, Ca. are performing vital environmental studies. By analyzing aerial film from various sources, these systems are detecting the precise location of ocean oil slicks, pinpointing blight areas in agricultural crops, evaluating satellite weather photos, and tackling numerous other image-evaluation tasks in which an absence of shading is a must.

By assigning a color to each gray level, the I²S units using Sierra cameras achieve an exceptional degree of accuracy.

Sierra's Video Standard Model LSV-1 with shading correction, for example, enables I²S systems to measure $\pm 2\%$ of peak white anywhere in the field.

In addition, the high signal-to-noise feature of Sierra cameras allows the video digitizer to sample at a rate in excess of 15 MHz. As a result, gray levels, even in the smallest of areas, are reproduced exactly.

The 2-piece Sierra camera is used on Model 4020 (top of the I²S line). The 4020 is a high-precision system used extensively in difficult low-contrast shading applications—primarily for remote sensing in such areas as forestry, agriculture, meteorology and geology.

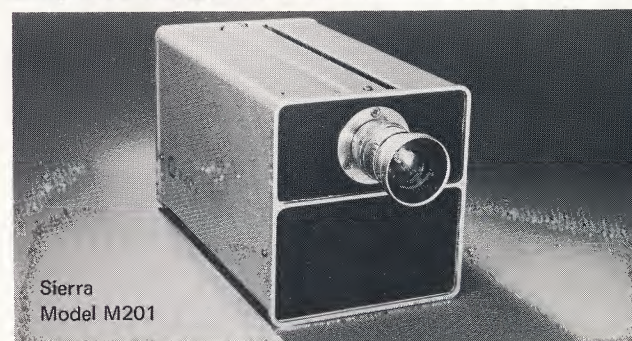
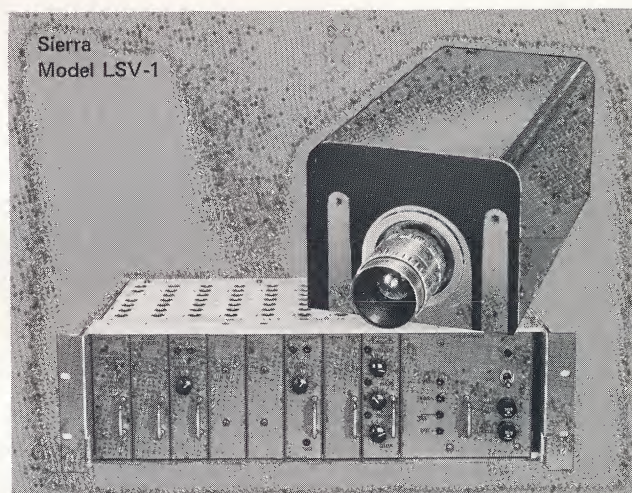


The MINICON (Model M201), Sierra's mini TV camera, is used mainly with I²S Model 4000 edge enhancer. It delivers less than 5% shading plus a higher signal-to-noise ratio than any competitive unit. With external drive, it accepts horizontal and vertical timing pulses from the sync generator.

The MINICON is ideal for applications where the ultra-high precision of the 2-piece camera is not required. The 4000 is used mainly when the interest is in small rather than large subjects in a picture—in spotting a hair-line fracture in an X-Ray, for example.

Numerous Sierra cameras are now at work in I²S systems, with orders for more currently being filled.

With I²S, as with many other companies, it is Sierra's ability to build special cameras for custom requirements—to perform in-depth speculative engineering—that has made it the acknowledged leader in its field.

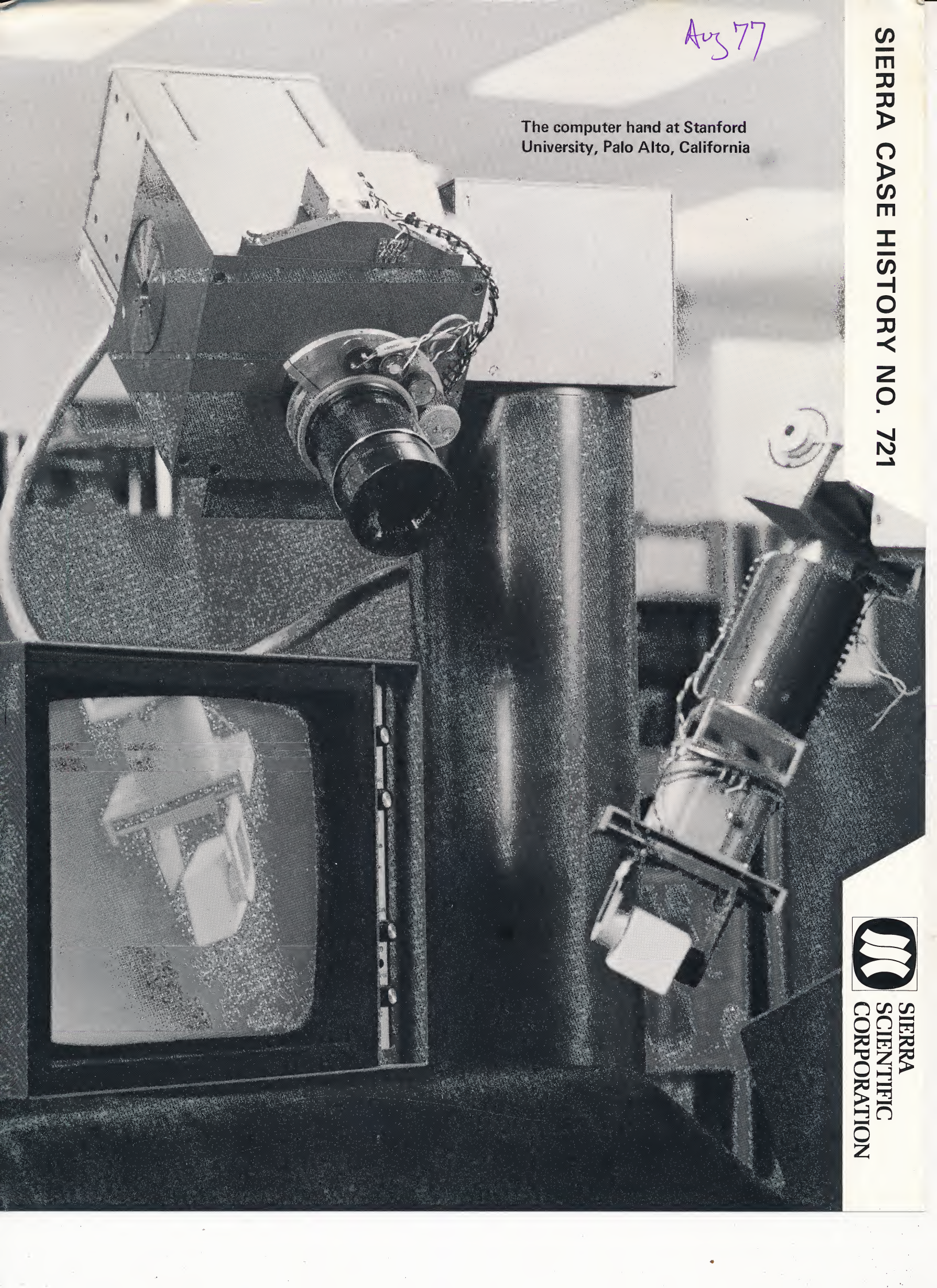


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Aug 77

The computer hand at Stanford
University, Palo Alto, California

SIERRA CASE HISTORY NO. 721



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Sierra Helping Stanford — in Artificial Intelligence Studies

What can a computer do if you give it hands? That's the question researchers in the "Hand-Eye" group of Stanford University's Artificial Intelligence Project are busy trying to answer.

They have given one computer an electro-mechanical hand and—with only visual input being used—are developing the software programs that already have the computer successfully playing *Instant Insanity*. This game (well known to American kids) requires you to stack multi-colored blocks in such a way that no adjacent sides have the same color.

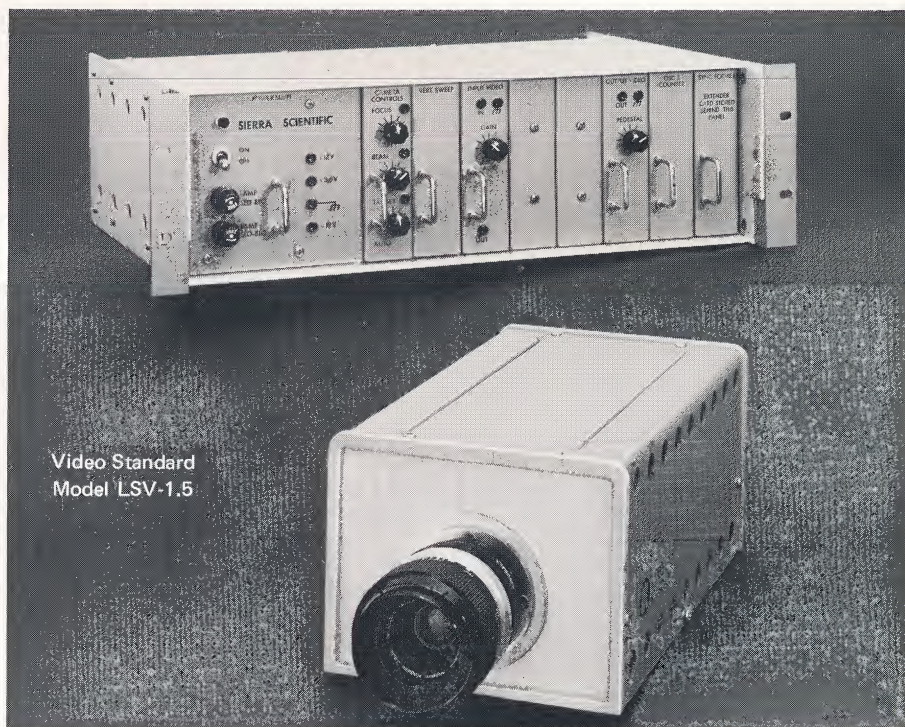
Sierra's Video Standard LSV-1.5 camera was selected as the computer's "eye" because of its high resolution and exceptionally high signal-to-noise ratio. Noise was a major concern because of its tendency to confuse the computer's digitizing process.

In addition, the LSV-1.5 easily interfaces with the computer because of its true DC output. Blanking level is 0 vdc regardless of video content. A TTL adapter is available—plus slow scanning (to one frame per second) to reduce data rates.

Sierra is soon to introduce a product which will allow direct computer control of scanning.

Stanford sees its computer hand assembling complete do-it-yourself Heath kits within 10 to 15 years. But the real purpose of the experiment is not to find commercial ways to replace man with the computer. The practical value of such computers is seen in hazardous environments such as chemically corrosive or radioactive areas where man's presence would be endangered.

In a project similar to Stanford's—at Carnegie-Mellon University in Pittsburgh, PA—Sierra cameras with standard TV rates and slow scan are also "on hand."



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(Actual photo of display screen)

Don't Miss The Fine Print

If you've got a document-reading job like this that demands very high resolution — and high resolution uniformity throughout the screen — Sierra's LSV 1.5R is your television camera.

This precision instrument embodies the finest electronic tube technology plus sophisticated video amplifiers and linear deflection circuitry — your assurance of rock-stable performance and reliability.

The 1½" Vidicon System with a 25mm useful diameter delivers 1500 TV lines (center), 1200 (corners) at 525 scan lines. A choice of scan rates is yours, from 256 to 1536 lines per frame, including all EIA rates.

Astigmatism? Our center area anastigmatic index is 0.7 . . . something you'll really appreciate when getting down to the fine print. Literature awaits. Sierra Scientific, 2189 Leghorn Street, Mountain View, CA 94043, 969-9315.



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1977

525-140
with
super-sharpness